

DU RATE DESIGN BILL IMPACT EL SUMMARY

*Residential Rate OIR
Proceeding R.12-06-
013*

I. Introduction

Southern California Edison (SCE), Pacific Gas and Electric (PG&E) and San Diego Gas and Electric (SDG&E), identified collectively as the Joint IOUs, each developed bill impact calculators to allow for the ability to examine rate design proposal options at a high level. While each investor-owned utility (IOU) developed the calculators to best reflect how residential rate design is done within each IOU, the results are illustrative and may differ from what would be fully developed in a rate design proceeding.

While each IOU developed an individual bill calculator due to differences among the Joint IOUs, considerable efforts were made to ensure consistency to the degree possible. The following provides a summary of the common functionality and outputs of the 3 bill impact calculators and also identifies notable differences. Further details regarding the specific calculator functionality and outputs can be found in the respective IOU manuals.

The following includes:

- Section II: Summary of IOU RROIR Model Functionality
- Section III: Summary of IOU RROIR Model Output – References and Scenarios

II. Summary of IOU RROIR Model Functionality

The bill impact calculators provide for the ability to examine the following residential rate design options:

- **Tiered Rates**³: setting different rate levels relative to baseline volumetric usage.
- **Non-Volumetric Charges**: includes fixed customer charges (\$/month), such as basic service fees and minimum bill charges, and demand charges (\$/kW), based on either peak demand¹ or non-coincident demand².
- **Time-of Use Rates**: setting different rate levels depending upon the time period in which energy is used.
- **California Alternate Rates for Energy (CARE) Program**: alternative mechanism for providing assistance for low-income customers.

A. Tiered Rates

	SCE	PG&E	SDG&E
Current Rate Date ³	June 2012. <i>Option to select rates based on a selected effective date not available.</i>	<i>Option to select rates based on a selected effective date available.</i>	September 2012. <i>Option to select rates based on a selected effective date not available.</i>
Two Tier Rate Ratio	<i>Option to select percent</i>	<i>Option to select the</i>	<i>Option to select</i>

¹ Defined as maximum demand measured during the peak period.

² Defined as maximum demand during the billing period regardless of TOU period.

³ This refers to the existing inclining block rates corresponding to a recent effective date. It is used as a benchmark to compare different proposed non TOU rate structures.

	ratio differential between Tier 1 and Tier 2 for 2-Tier rate structure.	ratio of the rates of the two tiers can be chosen, if two tiers are chosen.	percent differential between Tier 1 and Tier 2 for 2-Tier rate structure
Number of Tiers	<i>Option to select</i> up to 5 Tiers	<i>Option to select</i> up to 5 Tiers	<ul style="list-style-type: none"> • <i>Option to select</i> up to 4 Tiers • Identified as legislative compliance through TRAC⁴ only
Tier Differentials	<p><i>Option to select:</i></p> <ul style="list-style-type: none"> • For rate structures with more than 2 tiers, Tier 1 and Tier 2 differential can be adjusted by unchecking the SB695 toggle and using “percentage over current levels” input fields. • Upper tier differentials as fixed cents/kWh 	<p><i>Option to select:</i></p> <ul style="list-style-type: none"> • Percent ratio differential between Tier 1 and Tier 2 for two-tier rate structure only • Upper tier differentials as fixed cents/kWh 	<p><i>Option to select:</i></p> <ul style="list-style-type: none"> • For rate structures with more than 2 tiers, ability to increase T1 and T2 from current with Tier 1 and Tier 2 differential consistent with current SB695 compliance. • Upper tier differentials as fixed cents/kWh
Baseline	<ul style="list-style-type: none"> • <i>Option to select</i> 55 percent (the current baseline allowance percentage) or 53 percent • Reflects select climate zones, seasons, and service types 	<p><i>Option to select</i></p> <p>choose 50 percent to 55 percent (the current baseline allowance percentage); currently not functional but will be made functional in future</p>	<p><i>Option to select</i></p> <p>not available at this time.</p> <ul style="list-style-type: none"> • Reflects climate zones, seasons, and service types
SB 695 Compliance	<i>Optional</i> compliance, i.e., ability to turn on and off	<i>Optional</i> T1 and/or T2 compliance	<i>Optional</i> ability to increase T1 and T2 with T1/T2 differential meeting current SB695 compliance under multiple tiered scenario.

⁴ Total Rate Adjustment Component (TRAC) – the rate component through which subsidies ensuring SB695 compliance are applied and recovered for SDG&E.

B. Non-Volumetric Charges

	SCE	PG&E	SDG&E
Minimum Bill	<i>Option with ability to select fixed dollar amount per month. Current \$0.059/day</i>	<i>Option with ability to select fixed dollar (\$4.50 for non-CARE) amount per month. If minimum Bill option is chosen, the Customer Charge (Basic Service Fee) option is turned off automatically by the model.</i>	<i>Option with ability to select dollar amount (cents/day). Current \$0.17/day</i>
Basic Service Fee (BSF)	<i>Option with ability to select dollar amount for flat monthly customer charge (\$/month).</i>	<i>Option with ability to select dollar amount for flat monthly customer charge (\$/month). Either minimum Bill or Customer Charge can be chosen but not both.</i>	<ul style="list-style-type: none"> • <i>Option with ability to select dollar amount for flat monthly customer charge (\$/month). Either minimum Bill or Customer Charge can be chosen but not both.</i> • Identified as recovery of customer related Distribution costs only
Minimum Charge imposed in lieu of Customer Charge	Minimum charge and/or customer charge can be selected	Minimum charge does not apply if Customer Charge is selected.	Minimum charge does not apply if Customer Charge is selected.
Demand Differentiated Basic Service Fee Adder	<i>Option with ability to select different customer charge for over and under kW breakpoint (\$/month). This functionality is combined with the BSF above.</i>	<i>Option with ability to select different customer charge for over and under kW breakpoint (\$/month) in addition to BSF.</i>	<ul style="list-style-type: none"> • <i>Option with ability to select different customer charge for over and under kW breakpoint (\$/month) in addition to BSF.</i> • Ability to select up to 3 breakpoints • Identified as recovery of Distribution demand related costs only
Non-Coincident	Included in Cost-based	Included in Cost-based	• <i>Option available</i>

Demand (NCD) Charge	reference	reference	<i>with ability to select dollar amount (\$/NCD-kW)</i> <ul style="list-style-type: none"> Identified as recovery of Distribution demand related costs only
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C. Time-of-Use (TOU)

	SCE	PG&E	SDG&E
TOU option	<i>Option available. TOU structure: Summer (June-September) with 3 TOU periods, Winter (October – May) with 2 TOU periods.</i>	<i>Option available. TOU structure: Summer (May through October, On-peak, Partial-peak, Off-peak), Winter (January through April, November, December, Partial-Peak, Off-peak).</i>	<i>Option available. TOU structure: Summer (May-October) with 3 TOU periods, Winter (November – April) with 3 TOU periods.</i>
Tiered or non-tiered TOU	<i>Option available with tiering reflected as baseline adjustment</i>	<i>Option available with tiering reflected as baseline adjustment</i>	<ul style="list-style-type: none"> <i>Option available with tiering reflected as baseline adjustment</i> <i>Baseline adjustment for tiered TOU reflected through TRAC</i>
TOU Differentials	<i>Option with ability to select commodity ratio applied to on-peak/off-peak rates and mid-peak/off-peak rates. This ratio can be provided as an input.</i>	<i>Option with ability to select ratio applied to on-peak/partial-peak rates and partial-peak/off-peak rates. This ratio can be provided as an input.</i>	<i>Option with ability to select ratio of on-peak to off-peak summer and winter.</i>
Peak Demand Charge	Included in Cost-based reference	Included in Cost-based reference	<ul style="list-style-type: none"> <i>Option available with ability to select dollar amount (\$/peak-kW)</i> Identified as recovery of

generation
capacity
Commodity costs
only

D. CARE

	SCE	PG&E	SDG&E
Remove cap on CARE T1T2	<i>Option available through SB695 Compliance toggle</i>	<i>Option available</i>	<i>Option available to move equal to non-CARE prior to discount</i>
Capping of CARE T3	<i>Not available</i>	<i>Option available</i>	<i>Option available to move equal to non-CARE prior to discount</i>
Percentage CARE bill discount(Volumetric)	<i>Option available to change percentage discount</i>	<i>Option available to change percentage discount</i>	<i>Option available to change percentage discount</i>
Fixed Charge CARE discount	<i>Option available to set monthly % discount</i>	<i>Option available to set CARE discount. It is same for customer charge, fixed charge and volumetric charge.</i>	<i>Option available to set monthly discount (\$/month)</i>

III. Summary of IOU RROIR Model Output

The following provides a high-level comparison of the output provided by the Joint IOU bill impact models. Further details are provided in the respective IOU manuals provided separately. Included are:

- **Reference Points:** common reference points are provided for comparison to rate design scenarios, specifically:
 - Current
 - Cost-based
 - 2001 Pre-AB1X
- **Scenarios:** The Joint IOUs provided 4 preliminary common scenarios for illustrative purposes to demonstrate the functionality and outputs of the bill impact calculators.
- **Output:** The bill impact calculators provide some preliminary outputs for rate scenarios. However, in order to ensure the availability of the models, some of the more detailed population analysis is available through the IOUs upon request.

A. Reference Points:

	SCE	PG&E	SDG&E
Current	<ul style="list-style-type: none"> • 5-Tier energy rate • No seasonal differentiation • T3/T5 differential = 7 cents/kWh 	Effective Date can be selected and corresponding current rates will be used by the model	<ul style="list-style-type: none"> • 4-Tiered energy rate • Seasonal differentiation • T3T4 differential = 2 cents/kWh
Cost-Based	<p>Distribution:</p> <ul style="list-style-type: none"> • Customer Charge for the recovery of customer-related Distribution costs • Non-coincident Demand Charge for the recovery of Distribution demand costs • Commodity: • Peak Demand Charge for the recovery of generation capacity commodity costs • TOU energy rate for the recovery of marginal energy costs • All other rate components consistent with current authorized rates. 	<p>Includes the following:</p> <ul style="list-style-type: none"> • Customer access charge • Other fixed charge • Generation energy charge • Generation capacity cost • Transmission capacity cost • Distribution primary and secondary capacity costs 	<p>Distribution:</p> <ul style="list-style-type: none"> • Customer Charge for the recovery of customer-related Distribution costs • Non-coincident Demand Charge for the recovery of Distribution demand costs • Commodity: • Peak Demand Charge for the recovery of generation capacity commodity costs • TOU energy rate for the recovery of marginal energy costs • TRAC: recovery of revenues set at equal cents/kWh. • All other rate components consistent with current authorized rates.
2001 pre-AB1X	2-tiered with 15% differential	2-tiered with 15% differential	2-tiered with approx. 20% differential

B. Scenarios:

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Customer Charge	\$20/month	\$10/month	\$5/month	\$5/month
Demand Differentiated	N/A	N/A	2 BSF levels: \$5/month for	2 BSF levels: \$5/month for

Basic Service Fee (BSF) Adder			customers with max annual demand <3kW; \$10/month for 3kW or above	customers with max annual demand <3kW; \$10/month for 3kW or above
TOU	None - Flat	150% OP/OF	None - Flat	150% OP/OF
Tiers	None	None	2 tiers with 20% differential	None
CARE	20% Discount	20% Discount	20% Discount	20% Discount

C. Output:

	SCE	PG&E	SDG&E
Total Rates	Comparison of Current Rates (6/1/2012), Cost-Based Rates, and the Selected Structure Total Rates.	Resulting rates, comparison with current rates and cost basis by climate zone	Comparison of Current Rates (9/1/2012), Cost-Based Rates, and the Selected Structure Total Rates.
Illustrative Bill Impact	Summary bill comparison for Low, Medium, and High users. Detailed bill comparisons for CARE/non-CARE, by Climate Zone, for Current rates, Cost-Based rates, and the Selected Structure rates.	Distribution (by range of percent bill impact) of number and percent of customers, monthly average usage, annual peak based load factor, average cents per kWh, average bill amount, bill to income ratio	Monthly bill comparison of Low, Medium, and High users by CARE/non-CARE, Climate Zone, and Type of Service for Current rates, Cost-Based rates, and the Selected Structure rates.
Resulting effective \$/kWh curve	Feature available in the model.	Available	Available upon request.
Customer Distribution of Bill Impacts for the Population	Feature available in the model for the sample customer population.	See "Illustrative Bill Impact"	Available upon request.
Customer Distribution of Bill Impacts as percentage of income for the Population	Feature available in the model for the sample customer population.	See "Illustrative Bill Impact"	Available upon request.